



# X-RAY ASTRONOMY 2019

*Current Challenges and New Frontiers in the Next Decade*

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## Water maser emission in hard X-ray selected AGN

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Water megamaser emission is powerful in tracing the inner region of active nuclei, mapping accretion disks and providing important clues on their absorption properties. From the broad band X-ray spectra of AGN it is possible to estimate the intrinsic power of the central engine and the obscuring column density. The synergy between X-ray and water maser studies allows to tackle the AGN inner physics from different perspectives. For a complete sample of AGN selected in the 20-40 keV energy range, we have investigated the presence of water maser emission and its connection to the X-ray emission, absorption and accretion rate. The hard X-ray selection of the sample results in a water maser detection rate much higher than that obtained from optically-selected samples, the nature of such evidence is here discussed.

### Topic

Active Galactic Nuclei: accretion physics and evolution across cosmic time

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